

REMARKS

Claim rejections under 35 USC 103 as to claims 1-4

Claims 1-4 have been rejected under 35 USC 103(a) as being unpatentable over Lehureau (4,025,784) in view of Worthington (6,760,928). Claim 1 is an independent claim, from which claims 2-4 ultimately depend. Applicant submits that at least as currently amended, claim 1 is patentable over Lehureau in view of Worthington, such that claims 2-4 are patentable at least because they depend from a patentable base claim.

The method of claim 1 is limited to determining whether there is a change in reflectivity of a storage medium from reflective to non-reflective, where if a leading sensor experiences this change, a focus actuator moves a focus lens farther away from the storage medium, and if a lagging sensor experiences this change, the focus actuator moves the focus lens closer to the storage medium. The Examiner has found in Lehureau all the elements of the claimed invention, except for a change in reflectivity from reflective to non-reflective, which he instead has found in Worthington, such that Lehureau in view of Worthington has been stated as rendering the claimed invention *prima facie* obvious.

Applicant provides two independent reasons why Lehureau in view of Worthington does not render the claimed invention obvious, however. First, there is no motivation to combine Lehureau in view of Worthington to yield the claimed invention. Second, Lehureau in view of Worthington does not actually disclose, teach, or suggest a reflectivity change from reflective to non-reflective. Each of these reasons is now discussed in detail.

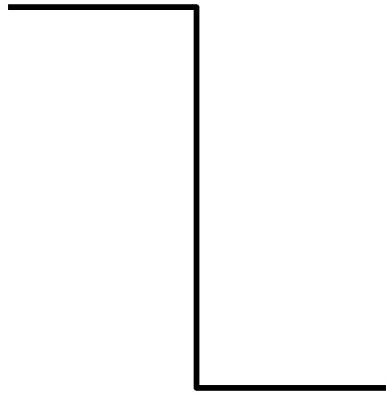
No motivation to modify Lehureau in view of Worthington

First, Applicant contends that there is no motivation to modify Lehureau in view of Worthington to yield the claimed invention. Applicant particularly discusses the Examiner's motivation for combining these two references to yield the claimed invention. The Examiner states that one of ordinary skill within the art would have been motivated "to provide the non-

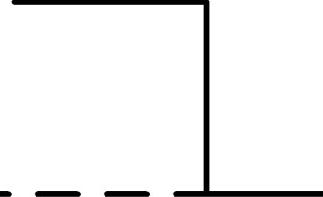
reflective portions in order to provide a greater contrast for detection by the sensors.” (Final office action, p. 3.) That is, the Examiner seemingly suggests that Lehureau teaches a reflectivity change from more reflective to less reflective, and that if Worthington (presumably) teaches a reflectivity change from reflective to non-reflective (which it actually does not, as is discussed in later in this response), then the presumably greater contrast of the latter is a motivation for combining the two references. Applicant respectfully submits, however, that this stated motivation for combining Lehureau with Worthington is defective.

In the first instance, the Examiner has not shown that going from reflective to non-reflective (presumably as in Worthington) provides *greater contrast* than going from more reflective to less reflective in Lehureau. For example, consider these two examples:

MORE REFLECTIVE
TO LESS REFLECTIVE



REFLECTIVE TO
NON-REFLECTIVE



In the left-hand example, there is a change from more reflective to less reflective, as in Lehureau. By comparison, in the right-hand example, there is a change from reflective to non-reflective, presumably as in Worthington. Thus, in this example, going from more reflective to less reflective

provides for *greater* contrast than going from reflective to non-reflective does, where contrast corresponds to the height of the drop between the two reflectivity levels.

These examples show two things. First, that going from reflective to non-reflective (presumably as in Worthington) does not necessarily provide for greater contrast than going from more reflective to less reflective does. In such instance, the motivation of providing greater contrast is not a reason to modify Lehureau in view of Worthington, since you may not necessarily get greater contrast in the resulting combination. As such, this stated motivation is not a reason to actually combine Lehureau in view of Worthington.

Second, providing for greater contrast is just as much a motivation to increasing the difference between the reflectivity levels in going from more reflective to less reflective, as in Lehureau without combination with Worthington, as it is to combining Lehureau with Worthington to go from reflective to non-reflective. As such, the stated motivation does not mean that one of ordinary skill within the prior art would be inclined to combine Lehureau and Worthington for this reason, but would be just as much inclined to *not* combine Lehureau with Worthington (i.e., such that the Examiner's stated motivation actually *teaches away* from combining Lehureau and Worthington). That is, unless you are using the claimed invention as a template to patch together the teachings of Lehureau and Worthington, the Examiner's stated motivation for combining these two references does not actually require or necessitate such a combination.

However, the Examiner's statement that there is a motivation to combine Lehureau with Worthington to provide for greater contrast – presuming that this is an actual motivation to combine these two references, which it is not, as discussed in the previous two paragraphs – begs the question as to why greater contrast is needed in the first place. Lehureau's disclosure provides for better focusing on optical media all by itself, and is already capable of distinguishing the differences in reflectivity between more reflective and less reflective, as in FIGs. 4 and 5 and the conjoining text of Lehureau. In light of this, why does one of ordinary skill within the art

want or need “greater contrast” in the first place? It is not as if providing greater contrast would provide “better” focusing; the Examiner has not shown this, and it is not suggested in either reference.

Indeed, Lehureau does not ever suggest that focusing is problematic due to the difference in contrast between the more reflective and the less reflective areas of the optical disc in question. As such, the “greater contrast” motivation forwarded by the Examiner is completely invented, and does not actually provide a reason as to why one of ordinary skill within the art would be motivated to modify Lehureau in view of Worthington. Lehureau already works “as is,” and there is no suggestion, teaching, or disclosure that its reflective change detection would be enhanced in any way by providing greater contrast. (And, indeed, it is not even clear that going from reflective to non-reflective provides for greater contrast, as has been discussed above.)

For all of these reasons, therefore, there is no actual teaching, suggestion, or motivation to modify Lehureau in view of Worthington to yield the claimed invention.

The cited prior art does not teach a reflectivity change from reflective to non-reflective

Second, Lehureau in view of Worthington does not actually disclose, teach, or suggest a reflectivity change in a storage medium from reflective to non-reflective. The Examiner has relied upon Worthington as teaching this aspect of the claimed invention, such that Applicant does likewise in explaining how Lehureau in view of Worthington does not teach, disclose, or suggest all the limitations of the claimed invention. Applicant is cognizant that the present rejection was proffered under 35 USC 103(a) over a combination of references, and is not attacking a single reference, Worthington. Rather, insofar as the Examiner relies upon Worthington as teaching certain aspects of the claimed invention, Applicant is discussing how Worthington does not actually teach these aspects of the claimed invention in explaining how Lehureau in view of Worthington does not teach all aspects of the claimed invention.

The Examiner has focused on column 18, lines 15-20, and column 21 line 66, through column 22, line 27, of Worthington as teaching a storage medium having a reflectivity change from reflective to non-reflective, consistent with the claimed invention. First, as to column 18, lines 15-20, Worthington only states that “the zones in a ZCLV formatted disc can be mastered in such a way as to provide *either* a highly reflective surface, a partly reflective surface, *or* a non-reflective surface.” Worthington does not state that one zone is reflective (either highly or partly) and another zone is non-reflective, such that there is a reflectivity change between reflective and non-reflective as in the claimed invention. Rather, it appears that Worthington is saying that *all* the zones can be highly reflective, partly reflective, *or* non-reflective, such that there would be no change in reflectivity in the Worthington disc (since all the zones would end up having the same reflectivity – either highly reflective, partly reflective, or non-reflective).

That is, Worthington does not disclose *different* zones having *different* reflectivities in column 18, lines 15-20, which it has to disclose in order to disclose a reflectivity change from reflective to non-reflective as in the claimed invention. The only way to say that Worthington does disclose such a reflectivity change is if you are using impermissible hindsight to guide reconstruction of the prior art to yield the claimed invention. On its face, however, Worthington in column 18, lines 15-20, does not say that it has a reflectivity change from reflective to non-reflective as in the claimed invention.

As to column 21, line 66, through column 22, line 27, Worthington states that the “zones may have a highly reflective surface to provide a contrast for a non-reflective investigational structure” and that the zones may instead “have a partially reflective surface to provide a contrast for a reflective investigational structure.” It is important to recognize that the claimed invention is limited to passing a light beam source over a reflectivity change “*of* a storage medium.” By comparison, whereas the zones of Worthington are *of* a storage medium – e.g., a ZCLV formatted disc – the “investigational structure” is not *of* the storage medium. Rather, the “investigational structures” are “cells, microorganisms, or any other biological, chemical, or

biochemical specimens.” (Col. 17, ll. 35-37) Such structures are deposited *on* the zones. (See, e.g., col. 18, ll. 6-14) As such, the investigational structures are *on* the storage medium, but are not *of* the storage medium.

Therefore, having zones with a highly reflective surface in Worthington does not provide for a change in reflectivity from reflective to non-reflective *of* the storage medium itself, as in the claimed invention. Rather, a zone with a highly reflectivity surface provides for a change in reflectivity from highly reflective to non-reflective *between* the storage medium and the investigational structure that has been deposited on the storage medium. The reflectivity change within the storage medium itself is of no consequence in Worthington, and, indeed, there is no teaching within Worthington anywhere that any type of reflectivity change between reflective and non-reflective is ever present *as to* (*i.e.*, *of*) *the storage medium itself*. The only relevant reflectivity change between reflective to non-reflective that is taught in Worthington is between the storage medium and the investigational structure. But this is different than a reflectivity change *of the storage medium* from reflective to non-reflective, as in the claimed invention.

For these reasons, Lehureau in view of Worthington does not teach, disclose, or suggest all the limitations of the claimed invention.

Claim rejections under 35 USC 103 as to claims 5-8

Claims 6-8 have been rejected under 35 USC 103(a) as being unpatentable over Lehureau (4,025,784) (hereinafter “Lehureau I”) over Worthington, and further in view of Lehureau (2004/0027964) (hereinafter “Lehureau II”). Claim 5 has been rejected under 35 USC 103(a) as being unpatentable over Lehureau I in view of Freeman (6,901,598). Claims 5-8, however, are dependent claims, depending from independent claim 1. Therefore, insofar as claim 1 is patentable, as has been discussed above, claims 5-8 are also patentable, since they depend from a base patentable claim.

Conclusion

Applicants have made a diligent effort to place the pending claims in condition for allowance, and request that they so be allowed. However, should there remain unresolved issues that require adverse action, it is respectfully requested that the Examiner telephone Mike Dryja, Applicants' Attorney, at 425-427-5094, so that such issues may be resolved as expeditiously as possible. For these reasons, this application is now considered to be in condition for allowance and such action is earnestly solicited.

Respectfully Submitted,



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